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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,223	05/31/2001	Desmond T. Curran	53924USA1B.010	6855
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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
			EXAMINER	
			LEWIS, AARON J	
			ART UNIT	PAPER NUMBER
			3743	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/871,223	CURRAN ET AL.
	Examiner	Art Unit
	AARON J. LEWIS	3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 November 2003.
- 2a) This action is **FINAL**.                                   2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 21-43 and 66-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 21-26, 29-43 and 66-92 is/are rejected.
- 7) Claim(s) 27 and 28 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 21,31,33,34,40,66,67,70-76,79,81-86,89,91,92 are rejected under 35 U.S.C. 102(e) as being anticipated by Magidson et al. ('698).

As to claim 21, Magidson et al. (fig.3) disclose a method of attaching a component to a web of material comprising filtration material, the method comprising the steps of: providing a web (12) comprising a layer of filtration material, the web having first and second major surfaces and an opening (col.2, line 65) provided through it; providing a component (14) that comprises a component base portion and a deformable extension member (40) that extends from the base to a tip; inserting the extension member tip through the opening and contacting a surface of the component base portion against

the first major surface of the web material with the extension member extending through the opening (fig.3 and col.2, lines 58-64); and then deforming the extension member (fig.3 and col.2, lines 62-64) back toward the component base portion so that at least a portion of the extension member abuts against the second major surface of the web material and, along with the contact of the surface of the component base portion and the first major surface of the web material, clamps the component in fluid tight relationship to the web material.

As to claim 31, Magidson et al. (figs.1 and 3) disclose the web material to comprise a respiratory mask body, the opening provided through the mask body and the component (14) attached to the mask body.

As to claims 33,40,70,81,91, Magidson et al. (col.2, line 62) disclose the step of deforming the extension member back towards the component base portion is conducted as a thermal forming process including the step of introducing a sufficient quantity of heat to the extension member of the component prior to the deforming step so as to permit the extension member to be deformed under process conditions that would otherwise not be suitable to perform the deforming step.

As to claim 34, Magidson et al. as discussed above with respect to claim 21, also disclose a method of making a respiratory mask (fig.1), by attaching a component (14) to a web of filtration material (12).

Claim 66 is substantially equivalent in scope to claim 21 and is anticipated by Magidson et al. for the reasons set forth above with respect to claim 21.

As to claims 67,79,89, Magidson et al. (col.2, line 62) disclose the component (14) to be clamped in fluid-tight (i.e. seal) relationship to the filtration material (12).

Claim 71 is substantially equivalent in scope to claim 34 and is anticipated by Magidson et al. for the reasons set forth above with respect to claim 34.

As to claims 72,82,92, the component (14) in Magidson et al. is an exhalation valve.

Claim 73 is substantially equivalent in scope to claim 21 and is anticipated by Magidson et al. for the reasons set forth above with respect to claim 21.

As to claims 74-76,84-86, the extension member (40) of Magidson et al. is deformed in a reverse bend, radially outwardly and towards the base portion as illustrated in fig.3.

Claim 83 is substantially equivalent in scope to claim 34 and is anticipated by Magidson et al. for the reasons set forth above with respect to claim 34.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 22,35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magidson et al. ('698) in view of Japuntich et al. ('892).

The difference between Magidson et al. and claim 22 is a multi-layer web material comprising at least one layer of filtration material.

Japuntich et al., in a method of attaching a component (14) to a web (12) of material comprising filtration material, teach a multi-layer web (fig.2) material comprising at least

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one layer of filtration material for the purpose of providing structure and support to the filtration layer (col.5, lines 10-23).

It would have been obvious to modify the web of filtration material of Magidson et al. to employ a multiple layer web because at least one additional shaping layer would have provided structure and support to the filtration layer as taught by Japuntich et al..

As to claims 35 and 36, Japuntich et al. (col.5, lines 10-29) teach molding (col.5, lines 15-19) a web of material comprising at least one filtration layer into a shaped mask body for a respiratory mask of a shape that will create an open volume about at least a part of a wearer's face followed the attachment of a component (14) to the molded mask. That is, Japuntich et al. disclose the attachment step by disclosing the attachment of the component to the mask, not to the web of filtration material (col.8, lines 27-31).

As to claim 37, the component which is attached to the mask of Magidson et al. and Japuntich et al. is an exhalation valve (14).

5. Claims 23-26, 29, 32, 39, 66, 69, 77, 80, 87, 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magidson et al. ('698) in view of Gookin ('969).

The differences between Magidson et al. and claim 23 are the steps of loading the component onto a die of a cooperating punch and die system and supporting at least a portion of the component base portion by an anvil portion of the die.

Gookin (page 2, col.1, lines 38-41 and col.2, lines 38-64), in a method and tool for roll clenching, teaches the steps of loading the component (10) onto a die of a cooperating punch and die system and supporting at least a portion of the component

base portion by an anvil portion (30) of the die for the purpose of bending/deforming an extension member (11) against the web (21) in clamping relationship therewith. At least one of the advantages method of Gookin is its compatibility with automatic high speed inserting machines for improved speed and efficiency (page 2, col.2, line 45).

Magidson et al. (col.2, lines 58-64) disclose a method of attaching a component to a filtration web by bending a flange back against the web in clamping relationship therewith. It would have been obvious to bend the flange of Magidson et al. back against the filtration web by loading the component onto a die of a cooperating punch and die system and supporting at least a portion of the component base portion by an anvil portion of the die for the purpose of bending/deforming the flange against the web in clamping relationship therewith because it would have provided an efficient and mechanized method of attaching a plurality of component to a plurality of filtration webs in a sequential manner as taught by Gookin.

As to claim 24, Gookin teaches the step of inserting the extension member (11) of the component through the opening of the web is conducted after the component is loaded on the die (page 2, col.2, lines 53-64) and includes moving the web material (21) and die relative to one another until a surface of the component base portion abuts the first major surface of the web material (page 2, col.2, lines 56-64).

As to claim 25, Gookin teaches the step of deforming the extension member of the component back toward the component base portion comprises advancing a punch assembly (18) relative to the web material (21) after the component (10) is inserted in position and deforming the extension member by contact of the extension member with

the advancing punch assembly, whereby the punch assembly bends a deformed portion of the extension member so that its tip is moved closer (figs.5 and 7) to the second major surface of the web material.

As to claim 26, Magidson et al. as modified by Gookin illustrates a second portion of the deformed portion that extends for a distance over the second surface of the web material (see fig.3 of Magidson et al.).

As to claims 29,77,87, Gookin teaches the second major surface of the web material and the surface of the component of the base portion that contacts the first major surface of the web are closer to each other than the thickness of the web material so as to compress the web material and thereby facilitate clamping of the component in fluid-tight relationship to the web material (page 1, col.1, lines 45-55 and col.2, lines 10-20).

As to claims 32,39,69,80,90, Gookin teaches the step of deforming the extension member back towards the component base portion is conducted as a cold forming process. That is, there is no disclosure of adding heat to the process.

As to claim 66, Magidson et al. as modified by Gookin teach the extension member being deformed by contact with a forming punch and die (#18,30,31 of Gookin), whereby a deformed portion (#10 of Gookin) of the extension member is bent relative to the non-defomed portion (#11 of Gookin) of the extension member.

6. Claims 30,78,88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magidson et al. in view of Gookin as applied to claims 23-26,29,32,39,66,69,77,80,87,90 above, and further in view of Newton ('224).

The difference between Magidson et al. as modified by Gookin and claim 30 is the step of providing a seal enhancing substance between at least one of the interface between the surface of the extension member and the second major surface of the web material and the interface between the surface of the component base portion and the first major surface of the web material so as to facilitate making a fluid-tight relationship of the component to the web material.

Newton, in a method of attaching a component to a web of material, teaches the step of providing a seal enhancing substance between at least one of the interface between the surface of the extension member and the second major surface of the web material and the interface between the surface of the component base portion and the first major surface of the web material so as to facilitate making a fluid-tight relationship of the component to the web material for the purpose of providing a cementitious bond between the members of the component and the web material (col.1, lines 27-30).

It would have been obvious to further modify the method of attaching a component to a web of material of Magidson et al. to include the step of providing a seal enhancing substance because it would have provided a cementitious bond between the members of the component and the web material as taught by Newton.

Claims 78 and 88 are substantially equivalent in scope to claim 30 and is included in Magidson et al. as further modified by Newton for the reasons set forth above with respect to claim 30.

7. Claims 38,41,43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magidson et al. ('698) in view of Jablonski ('365).

The difference between Magidson et al. and claim 38 is a step of converting web material that comprises at least one layer of filtration material into a foldable respiratory mask that can be folded into a flat state and unfolded to form a shape that will create an open volume about at least a part of a wearer's face.

Jablonski teaches converting web material that comprises at least one layer of filtration material into a foldable respiratory mask that can be folded into a flat state and unfolded to form a shape that will create an open volume about at least a part of a wearer's face for the purpose of storing the face mask in a flat configuration in an aircraft so that it occupies little space or weight capacity (col.2, lines 38-44).

It would have been obvious to convert the web material of the mask of Magidson et al. into a foldable respiratory mask that can be folded into a flat state because it would have provided a mask which can be stored in a flat configuration in an aircraft so that it occupies little space or weight capacity as taught by Jablonski.

As to claim 41, Magidson et al. as modified by Jablonski as discussed above with respect to claims 34 and 38, also teach an inline method of making plural foldable respiratory masks that can be folded into a flat state and unfolded to form a shape that will create an open volume about at least a part of a wearer's face. As to the claimed plurality of sequential forming operations, Jablonski teaches a plurality of individual masks each stored in a flat configuration within a tearable storage pouch (16).

As to claim 43, Magidson et al. (col.2, line 62) disclose the step of deforming the extension member back towards the component base portion is conducted as a thermal forming process including the step of introducing a sufficient quantity of heat to the

extension member of the component prior to the deforming step so as to permit the extension member to be deformed under process conditions that would otherwise not be suitable to perform the deforming step.

8. Claims 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Magidson et al. ('698) in view of Jablonski ('365) as applied to claims 38,41 and 43 above, and further in view of Gookin ('969).

The difference between Magidson et al. as modified by Jablonski and claim 42 is the deforming step being a cold forming process.

Gookin (page 2, col.1, lines 38-41 and col.2, lines 38-64), in a method and tool for roll clenching, teaches the steps of loading the component (10) onto a die of a cooperating punch and die system and supporting at least a portion of the component base portion by an anvil portion (30) of the die for the purpose of bending/deforming an extension member (11) against the web (21) in clamping relationship therewith, the step of deforming being a cold forming process. At least one of the advantages method of Gookin is its compatibility with automatic high speed inserting machines for improved speed and efficiency (page 2, col.2, line 45).

Magidson et al. (col.2, lines 58-64) disclose a method of attaching a component to a filtration web by bending a flange back against the web in clamping relationship therewith. It would have been obvious to bend the flange of Magidson et al. back against the filtration web by loading the component onto a die of a cooperating punch and die system and supporting at least a portion of the component base portion by an anvil portion of the die for the purpose of bending/deforming the flange against the web

in clamping relationship therewith because it would have provided an efficient and mechanized method of attaching a plurality of component to a plurality of filtration webs in a sequential manner as taught by Gookin.

***Claim Objections***

9. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 28 has been renumbered as claim 26.

***Response to Arguments***

10. The Declaration filed on 11/17/2003 under 37 CFR 1.131 has been considered but is ineffective to overcome the Magidson et al. ('698) reference.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

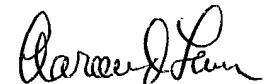
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON J. LEWIS whose telephone number is (703) 308-0716. The examiner can normally be reached on 9:30AM-6:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY A. BENNETT can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Art Unit 3743

Aaron J. Lewis  
August 09, 2004